

AFIT/GTM/LAL/96S-14

A STATISTICAL ANALYSIS OF  
VARIABLES RELATED TO  
OFFICER RETENTION

THESIS

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Abstract

The overall objective of this research effort was to statistically analyze survey responses which indicate the extent to which exiting officers say different variables affected their decision to separate. Two surveys were utilized for this analysis. These surveys were administered by the Air Force Personnel and Survey Branch in 1991 and 1993. The first analysis tested whether significant differences existed between rated and non-rated officers with regard to how strongly they feel about each of the variables with respect to their separation decision. The second analysis tested whether significant differences existed between the rated and the non-rated officers respectively, with respect to their 1991 and 1993 responses. The third analysis utilized pairwise comparisons to determine whether any of the variables were reported to have a significantly larger contribution to officer separation decisions than other variables. The results showed that many significant differences existed between the responses of rated and non-rated officers and between the 1991 and 1993 responses. Some variables, most notably the officer's say in the assignment process, were found to contribute more than others to separation decisions.

# A STATISTICAL ANALYSIS OF VARIABLES RELATED TO OFFICER RETENTION

## I. Introduction

### Fiscal Constraints

Since 1990, the Department of Defense (DoD) has faced large budget cuts due to fiscal policy. Each year, the DoD worked under a decreasing annual budget with reductions in personnel and defense dollars. To meet these fiscal constraints, the DoD began to downsize each of the military services to achieve congressionally mandated target levels. The DoD downsizing included both military bases and personnel. Each service was allowed to initiate their own drawdown schedule to meet specified end force requirements. The Air Force was directed to cut their force size 20 percent by FY 95 while trying to maintain a quality workforce (1: 37). While the services had three to four years to complete this drawdown, the Air Force chose to frontload their downsizing in the first two years. This force reduction was achieved by encouraging voluntary separations (VSI, SSB) and by involuntary reduction in force (RIF) actions during 1992.

### Prior Officer Separation Studies

During the early 1990s, personnel separations were desired by defense planners because of the large drawdown planned. However, in more recent years when the drawdown has been completed, officer separation has become a source of concern. The

specific variables affecting officer decisions to separate have become increasingly important. These variables have been researched in past years to determine the reasons officers separate from the military.

In 1981, Bonnell and Hendrick completed a study that focused on the significant variables affecting the turnover rate of pilots and navigators in the six- to eleven- year groups (3: 1). In the past decade, the DoD has sought to model the retention rate of its personnel as a function of changes in various policies (10: 1). Most studies have focused on the impact of changes to the retirement system while other have looked at variables such as income levels, bonuses, and entrance requirements.

#### General Issue

Retention and maximum utilization of the experienced and skilled individuals in an organization should be the goal of every personnel manager. The loss of highly trained personnel can have significant adverse impacts on an organization due to the loss of productive resources and the necessary costs associated with filling vacant positions and training replacement personnel. In the Air Force, retention of specially trained officers is of particular concern. Retention of personnel in the rated career fields, pilots and navigators, have generated several studies. In fact, a special incentive pay--flight pay--was increased in the mid-1980s to minimize organizational turnover. This incentive pay increase was a direct response to the commercial airline alternative being offered pilots.

Organizational turnover has been the subject of many research projects. These projects have identified numerous factors and variables associated with voluntary decisions to separate. To better measure and analyze these variables, the Air Force surveys officers

in hopes of understanding the personnel decision to leave the service. Two valuable tools used in recent years in measuring an officer's attitudes have been the New Directions Survey and the Careers Survey. The New Directions Survey has been given to all officers who have made the decision to leave the Air Force, while the Careers Survey is given to selected officers who have planned to make the Air Force a career.

The data collected from these surveys have been subjectively reviewed, but not statistically analyzed to identify significant differences. Since the sponsoring office is especially interested in separation issues, this thesis will analyze data collected from the New Directions Survey. This interest has been generated due to the fact that since the drawdown is somewhat complete, analysts are becoming more concerned with the reasons affecting separation decisions. To complete this study, the sample populations from the surveys will be divided into flying and non-flying career fields. This division will allow for evaluation of possible differences in perceptions between the two general occupations. The data collected from the New Directions Surveys given in 1991 and 1993 will be utilized for this thesis.

#### Problem Statement

Many variables can be irritants to both rated and non-rated officers during their career. With changes happening almost daily, uncertainties exist which affect career and job decisions involved with the current downsizing of DoD. This thesis will concentrate on the attitudes of those rated and non-rated junior officers who have voluntarily separated from the military and the significant variables affecting their decisions. Until now, the surveys have not been statistically analyzed to determine whether there are

significant differences between duty titles. Nor has analysis been completed determining whether significant differences exist between responses of various years.

This study will try to determine whether significant differences exist between the attitudes of the rated and the non-rated officers on each of the two surveys. Then, the two sets of survey responses will be statistically analyzed to determine whether there are significant differences within career fields, but between the different years surveyed. For example, the non-rated answers from 1991 and 1993 will be analyzed to determine whether there is a significant difference in responses within the non-rated group. All data to be analyzed will be collected from the 1991 New Directions Survey and the 1993 New Directions Survey, also called the Officer Separation Feedback Surveys.

#### Objective of the Research Effort

The overall objective of this research effort was to statistically analyze survey responses which indicate the extent to which exiting officers say different variables affected their decision to separate. While earlier studies limited the variables considered to approximately ten, this study will examine fourteen variables used in the recent officer separation feedback surveys accomplished by the Air Force Personnel Survey Branch. To facilitate development and understanding of the research objective, a summary of the hypothesis/variables used in this study will be given at this point.

### Hypotheses/Independent Variables

1. The first null hypothesis is that rated and non-rated officers do not differ significantly with regard to how strongly they feel about each of fourteen variables with respect to their separation decision. Rejection of this hypothesis with respect to any variable will reveal statistically significant differences between the rated and non-rated officers surveyed. The fourteen variables are:

- a. Availability of civilian jobs.
- b. Say in the assignment process.
- c. Geographic stability.
- d. Quality of senior Air Force leadership.
- e. Family separation.
- f. Additional duties.
- g. Work schedule.
- h. Pay and allowances.
- i. Recognition of one's efforts.
- j. Quality of unit leadership.
- k. Conflict with spouse's career.
- l. Promotion.
- m. Length of duty day.
- n. Job challenge.

2. The second null hypothesis is that no significant differences exist between the rated and the non-rated officers respectively, with respect to their 1991 and 1993 responses. This hypothesis will be tested for the same fourteen variables considered in the first hypothesis.
3. The third null hypothesis is that, for a given combination of officer rating and survey year, no significant differences exist among the scores assigned to the fourteen variables. Rejection of this hypothesis will reveal that the respondents felt significantly stronger about some variables than others.

#### Scope

This study focuses explicitly on the New Directions Survey and an officer's decision to separate from the Air Force. This research is not intended to make general overall conclusions about the likelihood of an officer's decision to remain in the Air Force.

#### Limitations

This research is limited to the officers' responses from the years of the surveys, 1991 and 1993. The goal is to analyze the responses from the surveys and determine any significant differences. Therefore, the research assumes that these responses are representative of the entire officer population during this time. Also, officer respondents are considered representative of the officers who elected not to complete this survey. Furthermore, research based on self-reported data assumes that the responses are representative of the officer's true reasons for separating from the Air Force.

For the scoring of the variables on the survey, certain assumptions had to be made with respect to the variables of geographic stability and family separation. Geographic

stability is assumed to refer to a lack of geographic stability in the officer's career.

Likewise, family separation is assumed to have been perceived by the survey respondents as being more prevalent in a military career than outside the military.

## II. Literature Review

### Officer Turnover

Employee turnover has long been an object of extensive investigation and analysis by organizational behavior researchers. By 1981, Dalton and others estimated that over 1,000 studies have been conducted on the employee turnover issue. One reason listed by Dalton for their interest is this issue has been the replacement cost of employees (6: 716).

One study which compared the replacement cost versus the retention cost of selected Air Force AFSCs was completed by Major McCracken at the Air Command and Staff College. His study looked at the four career fields of pilot, navigator, engineer, and maintenance officer. His first analysis just looked at the dollar value for replacement. His findings indicated that it was more costly to replace personnel than to retain them. He then completed another analysis which factored in experience as a variable. This analysis concluded that replacement costs were higher than retention costs for all four fields studied (16: 17).

### Job Attitude and Satisfaction Studies

The earliest known study which linked job attitudes to production levels did so by accident. The study is known as the Hawthorne Study. Originally, this study attempted to link production output with environmental changes in humidity, length of workday, lighting, and temperature. Unable to prove a link between these effects, the study discovered that interpersonal relationships between workers and supervisors had more

influence on production output than the environmental changes. This study was one of the first which linked job attitudes to individual and group performance (18).

Another important study relating job attitudes with satisfaction was completed by Herzberg et al. In 1959, Herzberg interviewed two hundred engineers and accountants to determine job satisfaction. From these interviews came Herzberg's motivation-hygiene theory. Herzberg identified five variables as being important for job satisfaction. These variables (motivators) were achievement, advancement, recognition, responsibility, and the work itself. Also, five variables were identified as requiring attention to prevent job dissatisfaction for the worker. These variables (hygiene) were company policy and administration, interpersonal relations, salary, supervision, and working conditions. Herzberg concluded that the motivators are the primary variables which meet the needs of the employee and produce the job satisfaction the employer is looking for (13). Many of these variables identified by Herzberg are still applicable to studies today, including this research study.

Most of these early studies did not relate job satisfaction directly to the turnover issue. While it might seem to be intuitively obvious that satisfaction should be inversely related to turnover, Porter and Steers completed a study in 1973 to verify this theory. Porter and Steers completed their analysis using a civilian production shop and their results supported an inverse relationship between job satisfaction and turnover (17: 318). This theory supports the relevance of the variables studied in this thesis.

While most of these studies involved civilian institutions, Cantrell completed a study in 1969 dealing directly with military attitudes. Cantrell studied the attitudes of airmen in the Military Airlift Command (MAC). He was able to identify four variables

which contributed to lower retention: additional duties, getting planned time off, hours flown each month, and low level of job satisfaction (4: 35). This study was one of the first to identify additional duties as a variable in an officer's separation decision.

Blackburn and Johnson, in a 1978 study, tried to determine variables involved in separation decisions. Some of the variables found to be significant included age, tenure, role clarity, responsibility, satisfaction with supervisory style, peer group integration, and job autonomy. In addition to the previously studied variables, the authors noted other variables which they considered to be potentially relevant. However, their data did not contain information for analysis of these variables. These omitted variables included temporary duties, family separations, the officer evaluation system, isolated assignments, and additional duties (2: 78). These variables which could not be analyzed at that time would prove to be important in future analyses of officers' decisions to separate.

Another thesis was completed by Talbot in 1979 which centered on differences in job satisfaction between rated and non-rated officers. While not adding any significant determination of variables supporting separation decisions, his study supported the perception that non-rated officers' job satisfaction was significantly higher than that of rated officers (22: 47).

In 1981, Bonnell and Hendrick expanded on Cantrell's study by researching the variables affecting the rated officer turnover in all Air Force commands. Their analysis also identified four variables which were key contributors to rated turnover. These variables included assignment policies, opportunity for civilian employment, pay and benefits, and satisfaction with supervisory style (3: 53)

In 1981, while at the Air Command and Staff College, Henggeler completed another study whose focus was job satisfaction. The author used data from the Organizational Assessment Package (OAP) developed by the Air Force Human Resources Laboratory. His research considered job satisfaction as a function of time on station, time in the present position, and aeronautical ratings. His results indicated that the perception of job satisfaction was significantly higher for non-rated officers than for rated officers (12: 1).

Also, Jay Steele completed a thesis, while attending the Naval Postgraduate School, trying to determine the variables which had the largest influence on career decisions of U.S. Army and Marine Corps officers between their fourth and twelfth years of service. Steele used data from the 1985 DoD survey of officer and enlisted personnel and discovered that job satisfaction was the biggest influence on these officers' career decisions (21: 28).

In 1986, Marchewka completed an unpublished study investigating significant differences in the job attitudes of non-rated and rated officers. His study centered on determining whether attitudinal differences existed among pilots, navigators, and non-rated officers. His results again supported the perception of greater satisfaction among non-rated officers than among their rated counterparts. These results were similar to those of the study completed by Talbot in 1979. The author noted that these results were related to the changing Air Force at that time. It is unknown whether the same job attitudinal differences still exist today with the current downsizing of the Air Force (14: 34).

### Demographics

Perceptions of differences in separation behavior between males and females has always existed. To determine whether these differences had any basis, an analysis was conducted by Viscusi in 1980. In this study, Viscusi analyzed 6,000 male and female workers to determine separation rates due to sex differences. Viscusi's study determined the differences in the female separation rates could be attributed to the characteristics of the job rather than the personal behavior of the individual. The separation rates of males and females were nearly identical when the separation rates were treated as a job characteristic (23: 396-397). For this study, the separation behavior of males and females will be assumed to be comparable.

### Alternate Job Opportunities

Prior to 1985, studies involving the relationship of civilian job opportunities with military retention were not common. However, after 1985, an increased interest in this area sparked numerous studies. One of the first such studies was conducted by the General Accounting Office (GAO). The GAO was tasked to analyze the differences between military and civilian compensation in a small sample of occupations. The study showed nearly all of the military occupations had an average pay below their civilian counterparts. One fallacy of this study was that most of the occupations centered around computer-related or occupations that were highly unionized. Nearly three-quarters of these civilian occupations had their pay fall above the average pay level (8: 1).

In 1989, Steel and Griffeth conducted a meta-analysis of 23 studies dealing with the relationship between perceived alternate job opportunities and turnover. Their meta-

analysis confirmed that many studies attempting to link the perception of opportunities with turnover met with limited success. The researchers found three methodological problems associated with the type of studies being conducted. These problems were the use of occupationally homogeneous samples which restricted the range of the predictor and criterion variables, failure to consider the effects of the turnover base rate and the inadequacy of standard instruments used to measure perceived alternatives (20: 846-852).

A 1992 study by Gill and Haurin examined the relationship between a spouse's earnings and the military member's decision to separate. The spouse's income was determined to be lower than that of civilian counterparts due to the mobility associated with the military member. Gill and Haurin concluded this income reduction had a negative effect on the retainability of the military member (9: 14). This relates directly to one of the New Directions Survey questions of whether the decision to separate was due to conflict with the spouse's career.

### Summary

Many studies have been completed to determine variables affecting job satisfaction. Over the years, studies have also sought to link various variables with employee turnover. Because of limited availability of data, early studies were restricted to a small number of variables.

However, later studies began to identify additional variables which may affect employee turnover. While the variables affecting officer turnover were not as important during the drawdown years, these variables have increased in importance as the Air Force seeks to maintain a steady force which can be ready for worldwide deployment. This

study will continue the analysis of variables reported as contributing to non-rated and rated officers' decisions to separate.

### III. Methodology

#### Data Gathering Plan

The survey questionnaires used for the statistical analysis are the surveys accomplished by the Air Force Personnel Survey Branch from 1 August 89 to 22 February 91 and from June 1993 to December 1993. The questionnaires were titled the New Directions Survey, also called the Separation Feedback Survey. These surveys were developed in response to an initiative proposed by the Officer Professional Development (OPD) Working Group and were approved for implementation by the Air Force Chief of Staff. The Separation Feedback Survey consisted of 83 questions. Many of these questions addressed demographic data or future plans of the separating officer. The fourteen variables considered in this research were expected to have a moderate or greater impact on the separation decision. An example of the Separation Feedback Survey can be found in Appendix A. The fourteen variables used for this research are survey items 34, 35, 37, 40, 42, 43, 45, 46, 48, 50, 51, 52, 53, and 54.

#### Survey Respondent Characterizations

The total sample for the 1991 survey consisted of 550 completed surveys, which represented a response rate of approximately 25 percent. Of the sample completing the survey, 275 were pilots and 39 were navigators. 236 of the respondents were non-rated officers. The total sample for the 1993 survey consisted of 332 completed surveys, which represented a response rate of 44 percent. Of the sample completing the survey, only 40

were rated personnel while 292 were non-rated personnel. This shift in percentages from 1991 to 1993 reflected the emphasis of the then-current personnel drawdown (7).

The separating officers who responded to the surveys were, for the most part, solid performers. Only one percent had an Unfavorable Information File (UIF) and just two percent had ever been non-selected for promotion. To gain another measure of quality, the commander was asked to rate the separating officer's job performance. When compared to other officers of the same rank and experience, most of the respondents (92%) were rated in the top half.

The choice by the individuals to leave the Air Force was not a rash decision. Four-fifths (80%) of the respondents made the decision to separate from active duty a month or more prior to application. With one-third (33%) having decided to separate over a year before submitting their paperwork, many respondents probably were still under an active duty service commitment. A majority of the respondents applied for separation only after discussions with other people. Most (90%) discussed their decision to separate with their friends or coworkers (1: 3).

#### Survey Bias

Bias could be involved with this survey if the attitudes of the respondents differ from the attitudes of the non-respondent officers. For the purpose of this statistical analysis, the attitudes of the respondents will be assumed to not be different than the attitudes of the non-respondents.

### Survey Validation and Verification

The Officer Separation Feedback Survey was built by the Air Force Personnel Survey Branch and approved for use by the Air Force Chief of Staff. As a precursor to sending the surveys into the field, the Survey Branch completed a pre-test within the center. Also, the Survey Branch selects available audiences which fit the survey requirements for their validation and verification. The initial survey was sent to the field in 1989. The survey released in 1991 was exactly like the first survey. Therefore, the second survey was considered to be consistent across the years of its usage. On the basis of this preparation, this author considers the survey used to be both valid and reliable (7).

### Instrumentation

The surveys were administered by the Air Force Personnel Survey Branch of the Air Force Military Personnel Center. All officers who requested a date of separation (DOS) during this time frame were given the survey to accomplish and return to the survey department.

The survey instruments called for responses using a four-point Likert scale to self-report the extent to which each variable contributed to the officer's decisions to separate from the Air Force. On the four-point Likert scale, a value of 0 equates to no contribution to the decision to leave the Air Force; a value of 1 equates to a minor contribution; a value of 2 equates to a moderate contribution; and a value of 3 equates to a major contribution. Each individual variable then had a calculated mean used to measure each group's response to the respective independent variables. The data collected was maintained by the Survey Branch at the Air Force Military Personnel Center.

## Statistical Test

The first two research questions will be analyzed using the same method, the two-sample t-test. These two questions are concerned with determining whether significant differences exist between groups. The first hypothesis concerns the two officer groups, while the second hypothesis concerns the differences between years within the groups. The third hypothesis, determining whether the variables differ in their significance in the separation decision, will be tested using box and whisker plots to determine any groupings and verified by testing with the two-sample t-test. The two-sample t-test is stated as follows:

$$\begin{aligned} H_0: (\mu_1 - \mu_2) &= 0 \\ H_a: (\mu_1 - \mu_2) &\neq 0 \end{aligned}$$

The test statistic is calculated as follows:

$$t = \frac{(\mu_1 - \mu_2)}{\sqrt{\left[ \frac{\sigma_1^2}{n_1} \right] + \left[ \frac{\sigma_2^2}{n_2} \right]}}$$

The rejection region will be  $t < -t_{\alpha/2}$  or  $t > t_{\alpha/2}$ .

The completed surveys of the respondents will be used for the statistical comparison of job attitudes of the rated and the non-rated officers who opted to separate. To accomplish this comparison, the statistical analysis will be completed by performing the procedures of the two-sample t-tests. The three factors involved in the analysis are the aeronautical rating of the respondents, the year group of the respondents, and the career decision variable under consideration. Each of these factors will be broken down into various levels for analysis. The aeronautical rating will be divided into either rated or non-

rated. The year group levels will be either 1991 or 1993. Lastly, the career decision variables will be divided into the fourteen variables previously listed in Chapter I.

However, in order to use the two-sample t-test, two assumptions must first be satisfied. These two assumptions are: the sampling distribution for each combination is normal, and the sample distributions are random and independent samples of the two populations sampled. Initially, since all observations total a number greater than thirty, there is a high degree of confidence the first assumption is met due to the Central Limit Theorem. However, the Wilk-Shapiro test statistic will be used to verify both assumptions (19).

Since the use of multiple comparisons increases the potential for erroneous conclusions, the Bonferroni method will be used in the statistical analysis. The level of significance for each comparison will be  $\alpha/c$  where  $\alpha$  is the overall level of significance desired (.05), and  $c$  is the number of pairs of means to be compared. The Bonferroni method will result in a set of confidence intervals in which we are at least  $100(1-\alpha)$  percent confident. The Bonferroni method is therefore conservative, since the confidence level is generally greater than initially specified. This will result in the intervals being somewhat wider than they would otherwise be in order to have the specified confidence level. The confidence level to be used with the Bonferroni method will equal a .0035 significance level.

To answer the third research question as stated in chapter one, Box and Whisker plots will be initially laid out to determine visually whether there are any significant differences. The whisker portion represents the variance of the variable shown. If the whisker portions of the two variables are not overlapped, a significant difference could

exist. If such a difference is noted visually, the Bonferroni method will be used on the variables involved to determine whether a significant difference actually exists. This method will be repeated to identify any other grouping differences.

For the purpose of these tests, an alpha significance level of .05 will be used. This will allow the determination of differences between the rated and the non-rated fields and also the yearly difference in means between the fields with a confidence level of 95 percent. With the inclusion of the Bonferroni method for analysis, the alpha significance level will be .0037.

## IV. Results

### Introduction

This chapter presents the results of data pertaining to the separation decisions of the respondents to the surveys. The same factors cited in previous chapters were employed in this analysis of the rated and the non-rated fields. The methodology outlined in the previous chapter was followed for the analysis of the data. However, the raw data was unavailable for some of the responses. This problem is addressed in the next section.

### Data Generation

The raw data was not available for the 1991 survey responses. However, the means and standard deviations were available. Therefore, raw data was simulated to have the same means and standard deviations. Data was randomly chosen using these characteristics and the Statistix random number generator. The data was selected from the normal distribution number generator. Random numbers were generated three times for each variable involved. These numbers were then tested to determine if there were any significant differences between the results. No differences were noted.

### Research Question #1 Data Analysis

The first research question concerned whether any significant differences existed between the rated and the non-rated officers with regard to the fourteen variables cited. Each variable will be addressed separately. Table 1 provides the detailed comparisons between the two study groups. Also, the survey questions relating to the fourteen variables can be found in Appendix A.

**TABLE 1**  
**1991/1993 NEW DIRECTIONS SURVEY RESULTS**  
**(RATED VS. NON-RATED)**

<b>Variables</b>	<b>1991</b>			<b>1993</b>		
	<b>Mean</b>	<b>SD</b>	<b>t-stat</b>	<b>Mean</b>	<b>SD</b>	<b>t-stat</b>
Availability of civilian jobs						
Non-Rated	1.57	1.01	8.41*	1.24	1.31	5.62*
Rated	2.16	1.17		0.66	1.03	
Say in the assignment process						
Non-Rated	1.47	1.24	3.15*	1.01	1.23	6.61*
Rated	1.74	1.24		1.72	1.19	
Geographic stability						
Non-Rated	1.16	1.09	4.08*	1.88	1.21	3.46*
Rated	1.91	1.11		1.30	1.29	
Quality of senior leadership						
Non-Rated	1.09	1.32	5.44*	1.49	1.18	1.01
Rated	1.59	1.38		1.60	1.25	
Family separation						
Non-Rated	1.07	1.06	3.40*	0.64	1.07	8.54*
Rated	1.32	1.18		1.57	1.36	
Additional duties						
Non-Rated	0.56	0.76	20.90*	0.55	0.93	2.68
Rated	1.74	1.48		0.76	0.98	
Work schedule						
Non-Rated	0.34	0.80	22.6*	0.41	0.81	4.31*
Rated	1.65	1.35		0.74	1.08	
Pay and allowances						
Non-Rated	0.80	1.35	3.27*	0.75	1.07	3.58*
Rated	1.08	1.31		0.47	0.79	
Recognition of efforts						
Non-Rated	1.11	1.09	4.08*	1.13	1.19	1.93
Rated	0.80	1.25		0.92	1.23	
Quality of unit leadership						
Non-Rated	1.01	0.93	2.67	0.98	1.11	5.80*
Rated	0.84	1.01		0.36	1.42	
Conflict with spouse's career						
Non-Rated	1.04	1.32	2.67	0.52	1.01	3.63*
Rated	0.80	1.11		0.90	1.25	

Variables	1991			1993		
	Mean	SD	t-stat	Mean	SD	t-stat
Promotion opportunity						
Non-Rated	1.32	1.20	9.69*	1.79	1.30	6.54*
Rated	0.54	0.86		0.90	1.25	
Length of duty day						
Non-Rated	0.29	0.38	30.19*	0.35	0.81	0
Rated	1.22	1.38		0.35	0.78	
Job challenge						
Non-Rated	1.18	1.13	10.82*	0.91	1.07	5.80*
Rated	0.36	0.84		0.47	0.79	

\*statistically significant with p<.0001

The null hypothesis for the first variable, that the contribution of the availability of civilian jobs was not significantly different between rated and non-rated officers, was rejected for both years. During both years of the survey, there was a significant difference between the rated and the non-rated fields. However, a large swing was noted between the two years. In the 1991 survey, the rated personnel scored this variable as the biggest contributor to their separation decision. But in 1993, the rated officers scored this variable as having only a minor contribution to their separation decision. In contrast, the non-rated officers scores held fairly steady between the two years.

The null hypothesis for the second variable, that the contribution of the officer's say in the assignment process was not significantly different between rated and non-rated officers, was rejected for both years. In both years of the survey, the rated officers scored this variable as having been a larger contributor to their separation decision. In fact, the difference increased from the 1991 to the 1993 survey. This larger difference is

attributable to the non-rated officers scoring this variable as having less of a contribution in 1993 than in 1991.

The null hypothesis for the third variable, that the contribution of lack of geographic stability was not significantly different between rated and non-rated officers, was rejected for both years. However, while both years were shown to have a significant difference, the groups scoring this variable as a larger contributor to their decision changed between the years. In the 1991 survey, the rated officers scored this variable higher than did non-rated officers. In the 1993 survey, the reverse was true.

The null hypothesis for the fourth variable, that the contribution of the quality of senior leadership was not significantly different between rated and non-rated officers, was rejected for 1991. In that year, a significant difference existed between the groups. However, by 1993 there was no significant difference between the two. This change can be directly attributable to the non-rated officers scoring this variable as a larger contributor to their decision to separate in 1993 than it had been in 1991.

The null hypothesis for the fifth variable, that the contribution of the amount of family separation was not significantly different between rated and non-rated, was rejected for both years. The relationship between the groups with regard to family separation was significantly different. The rated officers scored this variable as a larger contributor to their decision to separate from the Air Force.

The null hypothesis for the sixth variable, that the contribution of additional duties was not significantly different between rated and non-rated officers, was rejected only for 1991. While the difference was clearly significant in 1991, the difference was eliminated in the 1993 survey. This change was the direct result of the rated personnel

citing additional duties as less of a factor contributing to their separation decision in 1993. This can be clearly seen in Table 11 in Appendix B, which graphically summarizes the opinions expressed by rated officers in both year groups.

The null hypothesis for the seventh variable, that the contribution of the officer's work schedule was not significantly different between rated and non-rated officers, was rejected for both years. For both years of the survey, the rated officers scored this variable as a larger contributor to their decision to separate. However, during the second year, the rated officers viewed this factor as relatively less important in their decision than it had been previously.

The null hypothesis for the eighth variable, that the contribution of pay and allowances was not significantly different between rated and non-rated officers, was rejected for both years. However, while the rated officers scored this variable as a greater contributor in 1991 than the non-rated officers, the 1993 survey results had the non-rated officers rating this variable as a larger contributor to their separation decision.

The null hypothesis for the ninth variable, that the contribution of recognition of one's work was not significantly different between rated and non-rated officers, was rejected for 1991 only. In 1991, non-rated officers scored this variable as a larger contributor to their decision than did rated officers. But by 1993 the data did not support a significant difference between the two. This is attributed to the rated officers scoring this variable as a larger contributor to their decision in 1993.

The null hypothesis for the tenth variable, that the contribution of the quality of unit leadership was not significantly different between rated and non-rated officers, was rejected for 1993 only. The 1991 data had insufficient evidence to state a difference

existed. However, the 1993 statistical difference is attributable to the rated officers giving this variable less weight in their separation decision.

The null hypothesis for the eleventh variable, that the contribution of conflict with the spouse's career was not significantly different between rated and non-rated officers, also was rejected for 1993 only. Almost identical to the results of the tenth hypothesis, this variable was not significant in 1991. However, in 1993 the difference was significant due to the non-rated officer scoring this variable as less of a contribution to the separation decision.

The null hypothesis for the twelfth variable, that the contribution of promotion opportunity was not significantly different between rated and non-rated officers, was rejected for both years. Throughout both years, the non-rated officers scored this variable as a larger contributor to their decisions to separate than did the rated officers.

The null hypothesis for the thirteenth variable, that the contribution of the length of duty day was not significantly different between rated and non-rated officers, was rejected only for 1991. In the first survey, a large difference existed between the groups with the rated officers scoring this variable as a larger contributor. However, in the 1993 survey, the rated officers' scoring of this variable matched that of the non-rated officers.

The null hypothesis for the fourteenth variable, that the contribution of job challenge was not significantly different between rated and non-rated officers, was rejected for both years. In both cases, the non-rated officer scored this variable as a larger contributor to their decision to separate.

A summary is provided in Table 2 signifying which group of officers scored the respective variable significantly higher. As an example, if the 1991 non-rated officers'

responses to a variable were significantly higher than those of the rated officers, then 1991 would appear in the non-rated column for that variable. The "no difference" column represents no significant difference between the two groups.

TABLE 2  
SUMMARY OF SIGNIFICANT DIFFERENCES  
(RATED VS. NON-RATED)

Variables	Rated Higher	Non-Rated Higher	No Diff
Availability of civilian jobs	1991	1993	
Say in the assignment process	1991 1993		
Geographic stability	1991	1993	
Quality of senior leadership	1991		1993
Family separation	1991 1993		
Additional duties	1991		1993
Work Schedule	1993 1993		
Pay and allowances	1991	1993	
Recognition of efforts		1991	1993
Quality of unit leadership		1993	1991
Conflict with spouse's career	1993		1991
Promotion opportunity		1991 1993	
Length of duty day	1991		1993
Job challenge		1991 1993	

#### Research Question #2 Data Analysis

After completing the data analysis for the first research question, the data was then analyzed to determine whether any significant differences existed within each of the rated and the non-rated groups, with respect to the 1991 and the 1993 surveys. These

tests were completed with the same fourteen variables previously analyzed. Table 3 provides the detailed comparisons for the rated and non-rated officers respectively.

The null hypothesis for the first variable, that the contribution of the availability of civilian jobs was not significantly different between 1991 and 1993, was rejected for both groups. Both rated and non-rated officers scored this variable as less of a contributor to their decision to separate in 1993. While the non-rated officers changed somewhat, the rated officers decreased drastically from 2.16 to 0.66 over the two year period.

The null hypothesis for the second variable, that the contribution of the officer's say in the assignment process was not significantly different between 1991 and 1993, was rejected for only the non-rated officers. The non-rated officers scored this variable as less of a contributor to their separation decision in 1993 than in 1991 while the rated officers rated this variable approximately identically in each year.

The null hypothesis for the third variable, that the contribution of lack of geographic stability was not significantly different between 1991 and 1993, was rejected only for non-rated officers. The non-rated officers scored this variable lower in 1993. The rated officers only had a slight increase with this variable as a contributor.

The null hypothesis for the fourth variable, that the contribution of the quality of senior leadership was not significantly different between 1991 and 1993, was once again only rejected for non-rated officers. The non-rated officers scored a rather large increase in this variable as a contributor to their reason to separate as can be clearly seen in Table 8 in Appendix B. While the rated officers did not have a significant difference, this

variable's overall contribution to their separation decision was higher than it was for the non-rated officers in either year.

TABLE 3  
DIFFERENCES WITHIN RATED AND NON-RATED  
(1991 TO 1993)

Variables	Rated			Non-Rated		
	Mean	SD	t-stat	Mean	SD	t-stat
Availability of civilian jobs						
1991	2.16	1.17	16.21*	1.57	1.01	4.61*
1993	0.66	1.03		1.24	1.31	
Say in the assignment process						
1991	1.74	1.24	0.19	1.47	1.24	5.36*
1993	1.72	1.19		1.01	1.23	
Geographic stability						
1991	1.16	1.09	1.25	1.16	1.09	3.69*
1993	1.30	1.29		0.88	1.21	
Quality of senior leadership						
1991	1.59	1.38	0.08	1.09	1.32	4.41*
1993	1.60	1.25		1.49	1.18	
Family separation						
1991	1.32	1.18	2.22	1.07	1.06	5.90*
1993	1.57	1.36		0.64	1.07	
Additional duties						
1991	1.74	0.48	9.11*	0.56	0.76	0.19
1993	0.76	0.98		0.55	0.93	
Work schedule						
1991	1.65	0.35	8.64*	0.34	0.80	1.29
1993	0.74	1.08		0.41	0.81	
Pay and allowances						
1991	1.11	1.46	6.53*	0.80	1.35	0.54
1993	0.47	0.79		0.75	1.07	
Recognition of efforts						
1991	0.80	1.25	1.09	1.11	1.09	0.26
1993	0.92	1.23		1.13	1.19	
Quality of unit leadership						
1991	0.84	1.01	4.84*	1.01	0.93	0.46
1993	0.36	1.42		0.98	1.11	
Conflict with spouse's career						
1991	0.80	1.11	0.98	1.04	1.32	5.76*
1993	0.90	1.25		0.52	1.01	

Variables	Rated			Non-Rated		
	Mean	SD	t-stat	Mean	SD	t-stat
Promotion opportunity						
1991	0.54	0.86	6.66*	1.32	1.20	5.60*
Length of duty day						
1991	1.22	1.38	9.35*	0.29	0.38	2.22
Job challenge						
1991	0.36	0.84	1.06	1.18	1.13	3.48*
1993	0.47	0.79		0.91	1.09	

\*statistically significant with p<.0001

The null hypothesis for the fifth variable, that the contribution of family separation was not significantly different between 1991 and 1993, was rejected only for non-rated officers. However, the differences in each group went in different directions. The non-rated officers scored this variable as less of a contributor to their overall separation decision. On the other hand, the rated officers scored this variable as an increasing contributor in their separation decision, despite this variable not having a significant difference.

The null hypothesis for the sixth variable, that the contribution of additional duties was not significantly different between 1991 and 1993, was rejected only for rated officers. The rated officers scored this variable as a significantly smaller contributor to their separation decisions in 1993. Meanwhile, the non-rated officers did not differ in the two timeframes.

The null hypothesis for the seventh variable, that the contribution of the officer's work schedule was not significantly different between 1991 and 1993, was rejected only for rated officers. Similar to the variable of additional duties, the rated officers lowered

this variable's overall contribution to the separation decision by a significant level, while the non-rated officers did not.

The null hypothesis for the eighth variable, that the contribution of pay and allowances was not significantly different between 1991 and 1993, was rejected only for rated officers. The rated group scored a significant decrease in this variable as a contributor to their separation decision.

The null hypothesis for the ninth variable, that the contribution of recognition of one's work was not significantly different between 1991 and 1993, was not rejected for either rated or non-rated officers.

The null hypothesis for the tenth variable, that the contribution of the quality of the unit's leadership was not significantly different between 1991 and 1993, was rejected only for rated officers. This variable was scored lowered in 1993 by rated officers by a factor of about half. Meanwhile, non-rated officers barely had any change in this variable's contribution.

The null hypothesis for the eleventh variable, that the contribution of conflict with the spouse's career was not significantly different 1991 and 1993, was rejected only for non-rated officers. While the 1991 survey showed both groups scored this variable approximately equally, non-rated officers lowered their score of this variable as a contributing reason for their separation decisions in 1993.

The null hypothesis for the twelfth variable, that the contribution of promotion opportunity was not significantly different between 1991 and 1993, was rejected for both groups. Both rated and non-rated officers scored this variable as an increasing contributor to their decisions to separate from the Air Force. However, the non-rated

officers in both years scored this variable as a greater contributor to their separation decision than did rated officers.

The null hypothesis for the thirteenth variable, that the contribution of the length of duty day was not significantly different between 1991 and 1993, was rejected only for rated officers. They viewed this variable as being much less of a contributor in 1993 than it had been in 1991.

The null hypothesis for the fourteenth variable, that the contribution of job challenge was not significantly different between 1991 and 1993, was rejected only for the non-rated officers. Even though the non-rated officers' significant difference reflected a decrease, their rating indicated that this variable was still a greater contributor to their separation decision than it was for the rated officers.

A summary is provided in Table 4 to show the cases where rated and non-rated officers scored the respective variable either higher or lower between the two years. As an example, if rated officers responses to a variable were significantly higher in 1993 than in 1991, then "Rated" would appear in the 1993 higher column for that variable. The "no difference" column represents no significant difference between the two years. Non-rated is represented by NR.

**TABLE 4**  
**SUMMARY OF SIGNIFICANT DIFFERENCES**  
**(1991 VS. 1993)**

Variables	1993 Higher	1993 Lower	No Diff
Availability of civilian jobs		Rated NR	
Say in the assignment process		NR	Rated
Geographic stability		NR	Rated
Quality of senior leadership	NR		Rated
Family separation		NR	Rated
Additional duties		Rated	NR
Work Schedule		Rated	NR
Pay and allowances		Rated	NR
Recognition of efforts			Rated NR
Quality of unit leadership		Rated	NR
Conflict with spouse's career		NR	Rated
Promotion opportunity	Rated NR		
Length of duty day		Rated	NR
Job challenge		NR	Rated

#### Research Question #3 Data Analysis

The third hypothesis concerns whether any of the variables listed previously have a larger contribution to an officer's separation decision. To determine if there are any groupings in the variables, multiple pairwise comparisons have been accomplished. The non-rated 1991 and 1993 results were analyzed first to determine any differences. Then the rated 1991 and 1993 results were analyzed for the determination of any differences. To set up the analysis, the means of the variables were ranked in descending order. Then

box and whisker plots were laid out to visually identify apparent significant differences between groups of variables.

First, the rated officers responses were analyzed. The 1991 rated officer responses had two distinct groupings which were verified by testing with the two-sample t-test. These results can be seen in Table 5, which is a summary of the box and whisker plots. The first grouping consists of only one variable which is significantly different from the last eleven variables. This single variable was the availability of civilian jobs. A second grouping showed that the three variables, work schedule, quality of senior leadership, and family separation, were significantly different from the lowest five variables.

In contrast, the 1993 rated officer responses had only one separate grouping confirmed by the two-sample t-test. The top group consisted of three variables. These variables were the say in the assignment process, quality of senior leadership, and family separation. These three variables were significantly different from the lowest three variables. A summary of the box and whisker plots for the 1993 responses is given in Table 6. The rated officer variable groupings for both 1991 and 1993 are summarized in Table 7.

TABLE 5  
RATED OFFICER VARIABLE SCORING  
(1991)

Variables	Relative Contribution			
	Major	Mod	Minor	None
Availability of civilian jobs	-----			
Say in the assignment process		-----		
Additional duties		-----		
Work schedule		-----		
Quality of senior leadership		-----		
Family separation		-----		
Length of duty day		-----		
Geographic stability		-----		
Pay and allowances		-----		
Quality of unit leadership			-----	
Recognition of efforts			-----	
Conflict with spouse's career			-----	
Promotion opportunity				-----
Job challenge				-----

TABLE 6  
RATED OFFICER VARIABLE SCORING  
(1993)

Variables	Relative Contribution			
	Major	Mod	Minor	None
Say in the assignment process	-----			
Quality of senior leadership	-----			
Family separation	-----			
Quality of unit leadership		-----		
Geographic stability		-----		
Promotion opportunity		-----		
Recognition of efforts		-----		
Conflict with spouse's career		-----		
Additional duties		-----		
Work schedule		-----		
Availability of civilian jobs		-----		
Pay and allowances			-----	
Job challenge			-----	
Length of duty day				-----

TABLE 7  
RATED OFFICER SIGNIFICANT DIFFERENCE GROUPINGS\*  
(1991 VS. 1993)

	<b>Group 1</b>	<b>Group 2</b>	<b>Group 3</b>
<b>1991</b>	Availability of civilian jobs	Work schedule Quality of senior leadership Family separation	Quality of unit leadership Recognition of one's efforts Conflict with spouse's career Promotion opportunity Job challenge
<b>1993</b>	Say in assignment process	Pay and allowances Job challenge Length of duty day	

\*All differences statistically significant with  $p < .0001$

After completing the rated officer analysis, the non-rated officers' responses were analyzed. In the 1991 responses, two groups of variables were confirmed as being significantly different. The results of the 1991 non-rated officer responses can be seen in the Table 8, which is a summary of the box and whisker plots. The first group contains the top three variable responses. These variables were the availability of civilian jobs, say in the assignment process, and promotion opportunities. These three variables significantly differed from the bottom four. A second group also contained a significant difference. The two variables, work schedule and length of duty day, were significantly different from pay and allowances.

After completion of the 1991 analysis, the 1993 non-rated officer responses were analyzed. The non-rated officers results can be seen in the Table 9, which is a summary of the box and whisker plots. The first grouping consists of two variables which were significantly different from the ten lowest variables. A second group also contained a significant difference. The two variables, say in the assignment process and quality of

leadership, were significantly different from the lowest four variables. The 1991 and 1993 non-rated officer variable groupings are summarized in Table 10.

TABLE 8  
NON-RATED OFFICER VARIABLE SCORING  
(1991)

Variables	Relative Contribution			
	Major	Mod	Minor	None
Availability of civilian jobs	-----			
Say in the assignment process	-----			
Promotion opportunity	-----			
Job challenge	-----			
Geographic stability	-----			
Recognition of efforts	-----			
Quality of senior leadership	-----			
Family separation	-----			
Conflict with spouse's career	-----			
Quality of unit leadership	-----			
Pay and allowances		-----		
Additional duties		-----		
Work schedule			-----	
Length of duty day			-----	

TABLE 9  
NON-RATED OFFICER VARIABLE SCORING  
(1993)

Variables	Relative Contribution			
	Major	Mod	Minor	None
Promotion opportunity	-----			
Quality of senior leadership		-----		
Availability of civilian jobs			-----	
Recognition of efforts				-----
Say in the assignment process				-----
Quality of unit leadership				-----
Job challenge				-----
Geographic stability				-----
Pay and allowances				-----
Family separation				-----
Additional duties				-----
Conflict with spouse's career				-----
Work schedule				-----
Length of duty day				-----

TABLE 10  
 NON-RATED OFFICER SIGNIFICANT DIFFERENCE GROUPINGS\*  
 (1991 VS. 1993)

	Group 1	Group 2	Group 3
1991	Availability of civilian jobs Say in assignment process Promotion opportunity	Pay and allowances Additional duties	Work schedule Length of duty day
1993	Promotion opportunity Quality of senior leadership	Say in assignment process Quality of unit leadership	Additional duties Conflict with spouse's career Work schedule Length of duty day

\*All differences statistically significant with  $p < .0001$

## V. Conclusions and Recommendations

### Introduction

This chapter will summarize the statistical analysis of officer separation decisions completed in the previous chapter. The conclusions will be discussed in the order presented in research hypotheses. After the summation, several recommendations will be given.

### Conclusions

Rated vs. Non-Rated Differences. While Table 1 summarizes the significant differences between rated and non-rated officers, a few of the variables bear additional comments. These variables include the availability of civilian jobs, family separation, work schedule, promotion opportunities, job challenge and additional duties.

The first observation which is rather interesting concerns the availability of civilian jobs. The first survey showed that rated personnel scored this variable as a significantly higher contributor to their separation decision than did non-rated officers. However, the rated officers scored this variable significantly lower in 1993 while the non-rated scored it only somewhat lower. This large swing presumably reflects the greater sensitivity of the rated force to changes in the availability of commercial airline jobs.

Due to perceived differences between the rated and the non-rated career fields, some of the research results may have common explanations. These perceptions are that non-rated officers are more worried about promotion opportunities and job challenge while rated officers complain more about family separation and their work schedule. The statistical analysis of these variables supported all these perceived differences. The non-

rated officers scored promotion opportunities and job challenge higher than the rated officers. Meanwhile, rated personnel are generally on temporary duty (TDY) more often than non-rated officers. This fact should account for most of the differences with respect to family separation and work schedule. Also, rated personnel are perceived as only caring about their capability to continue flying, which they view as a challenging job. These views are backed up by the statistical analysis.

Differences Between 1991 and 1993. Although the significant differences between the survey years are summarized in Table 4, a few require further attention. These include say in the assignment process, family separation, quality of senior leadership, conflict with the spouse's career, promotion opportunity, and additional duties.

With the variable of say in the assignment process, the non-rated officers had a significant decrease in their scores between years. However, the rated officers did not show a significant decrease. Perhaps most of the decrease in the non-rated responses can be attributable to the new assignment process started during this time frame. This variable bears watching over the next few years to determine if the new process is being accepted.

With respect to family separation, only the non-rated officers showed a significant decrease between years. Although the rated response for this variable increased in 1993, the increase was not significant. With the drawdown placing more stress on rated officers by requiring additional TDYs for those remaining, this lack of significant difference is surprising.

Another variable which changed dramatically, with the rated officers, was additional duties. While cited as a major contributor to the separation decision in 1991, the contribution of this variable dramatically decreased with the 1993 responses. In

contrast, the non-rated group had this variable only as a slight contribution to their separation decision in either years. Perhaps some of the decrease in the rated scores can be attributed to many additional duties having been eliminated from the responsibilities of rated officers and reassigned to squadron executives.

The reported contribution of the quality of senior leadership to the separation decision for non-rated officers increased from the 1991 to the 1993 survey. This could be a great cause for concern if the trend continues. However, perhaps some of this perception can be attributed to the drawdown being completed during these years.

Both the rated and the non-rated officers scored promotion opportunity higher on the 1993 survey than the 1991 survey. This variable appears to be an increasing concern with the officers concerning their career decision. This rise in the scores could be attributed to the perception that military service promotions are less routine than in previous years. In this regard, the military occupation more closely resembles the civilian business world than it used to.

Differences Among the Fourteen Variables. While variable groupings are summarized in Tables 7 and 10, one variable bears further discussion. This variable is the say in the assignment process. While most of the other variable were scattered throughout the groupings, this variable remained within the higher groupings throughout. Since the assignment process underwent revision during the timeframe of these surveys, this variable's contribution to the separation decision may prove to be different in later surveys.

Overall Conclusions. While some conclusions can be drawn from this study, one fact which may affect our interpretations is the Air Force drawdown which

occurred during this time. Future survey responses should be compared with these results to determine the extent to which the drawdown may have influenced the 1991 and 1993 results. The Survey Branch at Randolph has completed another survey of 1995 separations which could be used for analysis. (Unfortunately, the data was still unavailable at the time the present research was accomplished.)

In conclusion, many variables affect an officer's decision to leave. As seen in this study, these variables were sometimes different for rated and non-rated officers. Similarly, these variables will vary for other groups of officers studied. In addition, their effect changed over time. Future surveys of departing officers must be interpreted in light of these dynamics. Further research may also help explain the differences among groups.

#### Recommendations

This research is only a snapshot of the variables contributing to officer separation decisions. Since this survey appears to be reissued every two years, follow-on studies could reveal trends involved with separation decisions and the variables which contribute to them.

Also, these survey results can be combined with the results from the Careers survey to give an overall picture of what variables are affecting an officer's decision to stay or separate. In the daily changing environment of today's military, the variables affecting separation decisions may be changing daily as well.

Appendix A: Sample Survey Questionnaire 1991/1993

## DEMOGRAPHIC INFORMATION

PLEASE LOCATE THIS BOX----->

in the top left corner of your answer sheet

GRADE	SEX	RACE	TAFMS	MAJCOM	YOB	MISCELLANEOUS
1	X		0 0	0 0	0 0	0 0 0 0 0 0 0 0
2			1 1	1 1	1 1	1 1 1 1 1 1 1 1
3			2 2	2 2	2 2	2 2 2 2 2 2 2 2
4			3 3	3 3	3 3	3 3 3 3 3 3 3 3
5			4 4	4 4	4 4	4 4 4 4 4 4 4 4
6			5 5	5 5	5 5	5 5 5 5 5 5 5 5
7			6 6	6 6	6 6	6 6 6 6 6 6 6 6
8			7 7	7 7	7 7	7 7 7 7 7 7 7 7
9			8 8	8 8	8 8	8 8 8 8 8 8 8 8
			9 9	9 9	9 9	9 9 9 9 9 9 9 9

Fill in the box by blackening in the appropriate bubbles under each heading.

### GRADE

- 01 - 2nd Lieutenant
- 02 - 1st Lieutenant
- 03 - Captain
- 04 - Major
- 05 - Lieutenant Colonel
- 06 - Colonel

### GENDER

- F - Female
- M - Male

### RACE

- A - American Indian/  
Alaskan Native
- B - Black (non-Hispanic)
- C - White (non-Hispanic)
- D - Hispanic
- E - Asian/Asian American  
/Pacific Islander
- F - Other

**TAFMS:** Please blacken in the bubbles corresponding to the years of total active federal military service you will have completed upon separation.

For example: If you have completed 6 years TAFMS, you would blacken in the "0" in the first column and "6" in the second column.

**MAJCOM:** Select the category which identifies your current assignment.

00 - United States Air Force Academy	88 - Air Force Communications Command
11 - United States Air Forces, Europe	99 - Air Combat Command
22 - Air Training Command	01 - Air Mobility Command
33 - Air University	02 - Air Force Materiel Command
44 - Headquarters, United States Air Force	03 - Air Force Space Command
55 - Pacific Air Forces	04 - Other
66 - Air Force Intelligence Command	
77 - Air Force Special Operations Command	

**YOB:** Please fill in the bubbles corresponding to the year you were born.

For example: If you were born in 1963, you would fill in the bubble "6" in the first column and the bubble "3" in the second column.

**MISCELLANEOUS:** Use the first two columns in which to fill in the first two numbers of your Duty AFSC. Don't worry about the AFSC prefix if you have one!

# NEW DIRECTIONS: A SURVEY OF SEPARATING OFFICERS

USAF SCN 93-19

**1. What is your source of commission?**

- A. OTS/OCS
- B. ROTC
- C. USAF Academy
- D. Other

**2. What is your marital status?**

- A. Married, civilian spouse
- B. Married, military spouse
- C. Single

**3. How many dependents do you have? (Do not include yourself or your spouse. For the purpose of this survey, a dependent is anyone related to you by blood, marriage, or adoption, and who depends on you for over half their support.)**

A. None	D. 3
B. 1	E. 4
C. 2	F. -5 or more

**4. What is your highest level of education?**

- A. Bachelor's degree
- B. Bachelor's degree plus some graduate studies
- C. Master's degree
- D. Master's degree plus additional graduate studies
- E. Doctorate (PhD or equivalent)

**5. When you separate, how much commissioned time (TAFCS) will you have in the military?**

- A. Less than 4 years
- B. 4, but less than 6 years
- C. 6, but less than 9 years
- D. 9, but less than 12 years
- E. 12, but less than 20 years
- F. 20 or more years

**6. What is your current primary aeronautical rating?**

- A. Not applicable
- B. Flight Surgeon/Nurse
- C. Navigator
- D. Pilot
- E. Other aeronautical rating

**7. If rated, what is your major weapon system group identifier?**

A. N/A, nonrated	F. Tactical Airlift
B. Bomber	G. Tanker
C. Fighter	H. Trainer
D. Helicopter	I. Other
E. Strategic Airlift	

**THE SEPARATION DECISION**

The questions in this section deal with your actual decision to separate from the Air Force and persons who may have been involved with that decision.

**8. Are you separating under a force management program?**

A. No

**YES:**

B. Voluntary Separation Incentive/Special Separation Benefit (VSI/SSB)  
C. Pilot Early Release Program (PERP)  
D. 15-Year Retirement  
E. Other (Please specify on the Comment Sheet)

**9. If there had not been force management programs (e.g., VSI/SSB, etc.) to encourage separation, would you have separated from the Air Force at this point in your career?**

A. N/A, didn't separate under a force management program  
B. Definitely  
C. Probably  
D. Uncertain  
E. Probably not  
F. Definitely not

**10. At the time of your separation decision, did you consider yourself eligible or a likely candidate for involuntary reduction in force (RIF)?**

A. Not eligible  
B. Eligible, but not likely  
C. Eligible and likely  
D. Eligible and very likely

**11. How long before you actually applied for separation did you make your decision to separate?**

A. Just a few days before I applied	D. 4 - 6 months
B. Less than a month	E. 7 - 12 months
C. 1 - 3 months	F. Over a year

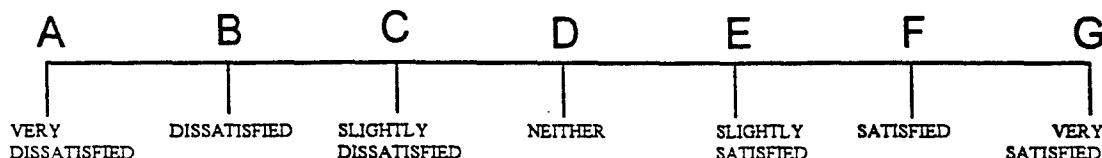
12. Did you discuss your decision to separate with your supervisor before you submitted your application?

- A. Yes
- B. No
- C. Don't remember

## JOB FACTORS

This series of questions covers specific factors related to your job and work environment which may or may not have contributed to your decision to separate from the Air Force.

Please rate the following factors on how satisfied you have been with each one during your tenure in the Air Force.



13. Availability of medical care	23. Geographic stability
14. Quality of senior Air Force leadership	24. Quality of coworkers
15. Work schedule	25. Job challenge
16. Quality of leadership of immediate supervisor	26. Quality of leadership at the unit level
17. Recognition of one's efforts	27. Availability of dental care
18. Esprit de corps	28. Say in the assignment process
19. Institutional benefits	29. Job responsibility
20. Amount of family separation	30. Length of duty day
21. Decision-making opportunities	31. Pay and allowances
22. Promotion opportunity	32. Additional duties

Please rate each factor (items 33 -54) on how much it contributed (*if any*) to your decision to separate from the Air Force.

A	B	C	D	E
NO CONTRIBUTION	MINOR CONTRIBUTION	MODERATE CONTRIBUTION	MAJOR CONTRIBUTION	NOT APPLICABLE

33. Availability of medical care	34. Quality of senior Air Force leadership	35. Work Schedule	36. Quality of leadership of immediate supervisor	37. Recognition of one's efforts	38. Esprit de corps	39. Institutional benefits	40. Amount of family separation	41. Decision-making opportunities	42. Promotion opportunities	43. Geographic stability	44. Quality of coworkers	45. Job challenge	46. Quality of leadership at the unit level	47. Availability of dental care	48. Say in the assignment process	49. Job responsibility	50. Length of duty day	51. Pay and allowances	52. Additional duties	53. Availability of civilian jobs	54. Conflict with spouse's career
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## YOUR SPOUSE

This section contains questions about your spouse. **IF YOU ARE SINGLE, SKIP TO QUESTION #61.**

55. Is your spouse currently employed?

- A. Yes, full time (35 hours or more per week)
- B. Yes, part time (less than 35 hours per week)
- C. No...SKIP TO QUESTION #60!

56. If your spouse *currently* works for pay on a full or part time basis in a civilian job or is self-employed, please indicate below the category which most closely describes the kind of work he or she does.

- A. Not applicable, military spouse
- B. Professional or technical (teacher, registered nurse, social worker, writer, artist)
- C. Managerial/administrative (accountant, labor relations specialist, school principal)
- D. Sales/technical (health technologist, computer programmer, LPN, sales supervisor, cashier)
- E. Clerical (secretary, bookkeeper, telephone operator)
- F. Crafts (plumber, carpenter, precision textile machine worker)
- G. Operative, except transport (assembler, sewing machine operator, hand work)
- H. Transport equipment operative (bus driver, crane operator)
- I. Laborer, except farm (hand packager, production helper)
- J. Service, including private household (food preparation and service worker, building cleaner)
- K. Farm laborer
- L. Other

57. What is your spouse's approximate gross monthly income?

- A. None
- B. Less than \$100
- C. \$100 - \$499
- D. \$500 - \$999
- E. \$1000 - \$1,499
- F. \$1,500 - \$1,999
- G. \$2,000 - \$2,499
- H. \$2,500 - \$2,999
- I. \$3,000 - \$3,499
- J. \$3,500 or more

58. Does your spouse plan to work at his/her current job after you separate?

- A. Yes
- B. No
- C. Don't know

59. How compatible was your military career with your spouse's career/job?

- A. Very compatible
- B. Compatible
- C. Somewhat compatible
- D. Neither compatible nor incompatible
- E. Somewhat incompatible
- F. Incompatible
- G. Very incompatible

60. What influence did your spouse have on your decision to separate?

- A. Encouraged me to separate from the Air Force
- B. Encouraged me to remain in the Air Force
- C. No influence either way

## FUTURE PLANS

This section concerns your plans after you separate from the Air Force.

61. Do you plan to join the National Guard or Reserve?

- A. Yes
- B. No
- C. Undecided

62. What do you plan to do after you leave the Air Force?

- A. Go to school
- B. Work
- C. Work and go to school
- D. Other
- E. Don't know

63. What is your perception regarding the availability of jobs in the civilian work force in your present career field?

- A. Plentiful
- B. Available
- C. Few
- D. Unavailable
- E. No direct job counterpart
- F. Don't know

64. If you plan to work after you leave the Air Force, do you already have a job arranged?

- A. Not applicable
- B. Yes
- C. No

65. For whom do you plan to work?

- A. Not applicable
- B. Self
- C. Government
- D. Private industry (other than airline)
- E. Airline
- F. Other

66. What type of position do you plan to hold after you leave the Air Force?

A. Aviator	H. Operative (transportation)
B. Clerical worker	I. Professional or technical
C. Craft worker	J. Sales worker
D. Farmer or farm worker	K. Service worker (except homemaker)
E. Homemaker	L. Student
F. Manager or administrator	M. Other
G. Operative (except transportation)	

67. Based on your response to item 66, is this the same type of occupation you had in the Air Force?

- A. No comparable civilian occupation
- B. Yes
- C. No
- D. Not sure

68. If you have a job waiting for you when you separate, what is your *expected* gross annual income?

A. None or N/A	G. \$50,001 - \$60,000
B. Less than \$10,000	H. \$60,001 - \$70,000
C. \$10,000 - \$20,000	I. \$70,001 - \$80,000
D. \$20,001 - \$30,000	J. \$80,001 - \$90,000
E. \$30,001 - \$40,000	K. More than \$90,000
F. \$40,001 - \$50,000	

69. What do you *expect* your gross annual income will be about 3 years from now?

A. None or N/A	G. \$50,001 - \$60,000
B. Less than \$10,000	H. \$60,001 - \$70,000
C. \$10,001 - \$20,000	I. \$70,001 - \$80,000
D. \$20,001 - \$30,000	J. \$80,001 - \$90,000
E. \$30,001 - \$40,000	K. More than \$90,000
F. \$40,001 - \$50,000	

70. Following your separation from the Air Force, will you be relocating outside the local area (city or township) in which you presently reside?

- A. No
- B. Yes, but less than 50 miles
- C. Yes, but 50 or more miles away

#### MISCELLANEOUS

71. Overall, how satisfied have you been with your experiences in the Air Force?

A. Very satisfied	E. Somewhat dissatisfied
B. Satisfied	F. Dissatisfied
C. Somewhat satisfied	G. Very dissatisfied
D. Neither satisfied nor dissatisfied	

72. Where have you received the *majority* of the civilian job opportunity information which you used in making your separation decision?

- A. I've not received any information or did not use it in making my decision
- B. Literature directly from the companies/schools
- C. Future Aviation Professionals of America (FAPA)
- D. Other professional journals or publications
- E. Newspapers
- F. "Word of mouth"
- G. Personal contact(s) made while occupying my present Air Force position
- H. Personal contact(s) made outside my Air Force position
- I. Transition Bulletin Board
- J. Defense Outplacement Referral System (DORS)
- K. Other listings/sources at the Transition Assistance Office in the Family Support Center

73. Have you received counseling, instruction, or training from the Air Force about any of the following? (Mark all that apply.)

- A. Your veterans' benefits in education, medical care, or disability
- B. Unemployment insurance rights you might have
- C. Opportunities to join the Guard or Reserve
- D. How to look for a job
- E. How to use the Job Service or State Employment Service (or Unemployment Office)
- F. How to prepare a resume
- G. How to interview for a job
- H. How to fill out a job application
- I. Veterans' assistance organizations you might join or get services from

74. Have you attended a formal Transition Assistance Program Seminar sponsored by the Air Force?

- A. Not yet, but I plan to find out about it/attend later
- B. No, one is not available at my duty station
- C. No, I am not interested in attending
- D. YES...Please continue to next question and complete the survey.

**IF YOU DID NOT ATTEND A TRANSITION ASSISTANCE PROGRAM SEMINAR, YOU HAVE COMPLETED THIS SURVEY! PLEASE CONTINUE TO THE COMMENT SECTION.**

75. Was the Transition Assistance Program (TAP) Seminar helpful in actually helping you *secure* the job you will have after you separate from the Air Force?

- A. N/A, I do not have a job lined up
- B. The seminar was extremely helpful
- C. The seminar was very helpful
- D. The seminar was somewhat helpful
- E. The seminar was not at all helpful

**CONTINUE ONLY IF YOU HAVE ATTENDED A TAP SEMINAR:**

Please use the following scale to indicate how helpful or not helpful each of the following Air Force information sources was in assisting you with your job search.

A	B	C	D	E	F
EXTREMELY HELPFUL	VERY HELPFUL	HELPFUL	SOMEWHAT HELPFUL	NOT AT ALL HELPFUL	DID NOT USE

76. How to look for a job
77. How to use the Job Service or State Employment Service (or Unemployment Office)
78. How to prepare a resume
79. How to interview for a job
80. How to fill out a job application
81. Veterans' assistance organizations you might join or get services from
82. Opportunities to join the Guard or Reserve
83. The Air Force Employment Opportunities List

Appendix B. Additional Data

TABLE 11  
CONTRIBUTION TO SEPARATION DECISION  
(RATED OFFICERS)

Factors	0 No Contr	1 Minor	2 Moderate	3 Major
Availability of civilian jobs	+++++ 	+++++ 	+++++ 	+++++* 
Say in the assignment process	+++++ 	+++++ 	+++++ 	+++++ 
Geographic stability	+++++ 	+++++ 	+++++ 	+++++ 
Quality of senior leadership	+++++ 	+++++ 	+++++ 	+++++ 
Family separation	+++++ 	+++++ 	+++++ 	+++++ 
Additional duties	+++++ 	+++++ 	+++++ 	+++++ 
Work Schedule	+++++ 	+++++ 	+++++ 	+++++ 
Pay and allowances	+++++ 	+++++ 	+++++ 	+++++ 
Recognition of efforts	+++++ 	+++++ 	+++++ 	+++++ 
Quality of unit leadership	+++++ 	+++++ 	+++++ 	+++++ 
Conflict with spouse's career	+++++ 	+++++ 	+++++ 	+++++ 
Promotion opportunity	++++ 	++++ 	++++ 	++++ 
Length of duty day	+++++ 	+++++ 	+++++ 	+++++ 
Job challenge	++ 			

\* +++ signifies 1991 responses |||| signifies 1993 responses.

TABLE 12  
CONTRIBUTION TO SEPARATION DECISION  
(NON-RATED OFFICERS)

Factors	0 No Contr	1 Minor	2 Moderate	3 Major
Availability of civilian jobs	+++++* 			
Say in the assignment process	++++++ 			
Geographic stability	++++++ 			
Quality of senior leadership	++++++ 			
Family separation	++++++ 			
Additional duties	++++ 			
Work Schedule	++++ 			
Pay and allowances	++++++ 			
Recognition of efforts	++++++ 			
Quality of unit leadership	++++++ 			
Conflict with spouse's career	++++++ 			
Promotion opportunity	++++++ 			
Length of duty day	+++ 			
Job challenge	++++++ 			

\* +++ signifies 1991 responses, ||| signifies 1993 responses.

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Vita

Major Gerald A. Scheuchner [REDACTED] Joseph, MI. He spent most of his life in Baroda, MI, and graduated from Michigan Lutheran High School in St. Joseph, MI. In 1983, he graduated from Western Michigan University with a Bachelor of Business Administration. In 1984, he received a commission from Officer Training School in Lackland, TX as a Second Lieutenant in the United States Air Force. He went through navigator training at Mather AFB and Castle AFB, receiving his wings as a KC-135 crewmember. In 1985, he was assigned to March AFB, CA. He was subsequently assigned to Eaker AFB, AR; Grissom AFB, IN; Castle AFB, CA, and eventually to the Air Force Institute of Technology, Wright-Patterson AFB, OH in May 1995. His follow-on assignment will be to Air Mobility Command headquarters at Scott AFB, IL upon graduation in September 1996.

# REPORT DOCUMENTATION PAGE

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<p>The overall objective of this research effort was to statistically analyze survey responses which indicate the extent to which exiting officers say different variables affected their decision to separate. Two surveys were utilized for this analysis. These surveys were administered by the Air Force Personnel and Survey Branch in 1991 and 1993. The first analysis tested whether significant differences existed between rated and non-rated officers with regard to how strongly they feel about each of the variables with respect to their separation decision. The second analysis tested whether significant differences existed between the rated and the non-rated officers respectively, with respect to their 1991 and 1993 responses. The third analysis utilized pairwise comparisons to determine whether any of the variables were reported to have a significantly larger contribution to officer separation decisions than other variables. The results showed that many significant differences existed between the responses of rated and non-rated officers and between the 1991 and 1993 responses. Some variables, most notably the officer's say in the assignment process, were found to contribute more than others to separation decisions.</p>		
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3. Please estimate what this research would have cost in terms of manpower and dollars if it had been accomplished under contract or if it had been done in-house.

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4. Whether or not you were able to establish an equivalent value for this research (in Question 3), what is your estimate of its significance?

a. Highly Significant      b. Significant      c. Slightly Significant      d. Of No Significance

5. Comments (Please feel free to use a separate sheet for more detailed answers and include it

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